

Engaging people in managing natural resources

Engaging people in managing natural resources

(Biodiversity Documentation Process and Information Systems)

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Part II - Data Tables

“यः क्रियावान् स पण्डितः”

Hollow talk without action is useless

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Table 1: Study area

Fill in the information of the area selected for PBR study as mentioned in Part I - Section 4.1.

Place of study - Name of Gram Panchayat / Municipality	
All included - Wadi / Village / Mohalla names	
Panchayat Samiti	
Taluka	
District	
State	
The zip code for the nearest post	
Census code	

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Latitude	
Longitude	

Table 2 : Study group

Fill in the information of PBR study group as mentioned in Part I - section 4.2. It should explain the role (one or more) of each person in the study group in the PBR process. The list of such roles is given below the table. It is mandatory to name at least one member.

A. No.	First name	Middle name	Last name	Gender	Age (years)	Address	Village / City	Taluka	District	State	Pincode

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A. No.	First name	Middle name	Last name	Mobile	E-mail	Institutions concerned	Special knowledge / skills	Role	Current main business	Starting Date of work	End date of work

Role in PBR process

- 1) Gather information by observation
- 2) Provide information based on experience
- 3) Mention the information provided by others
- 4) Gather information on the basis of documents
- 5) Fill in the information in the computer
- 6) Providing scientific information
- 7) Supervision, guidance, coordination

Local and External User groups

The information of various User groups related to the study area should be recorded in the following tables as given in Part I - section 4.12 . Indicate the activities of each User group and the approximate number of participants in that group. Individuals / Families / Village or Nomadic Caravan should be mentioned as per the details available here. For example, people from outside the area of a village collect forest produce. In this case all surrounding villages comprise of an external user group.

Table 3 : Local User Group

S.No.	Name of Local User group	List of important tasks (a maximum of 20 important tasks for an interest group should be left out)	Type of group element (e.g. individual, family, nomadic family, village)	Approximate number of related elements

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Table 4 : External User group

S.No.	Name of External User group	List of important tasks (a maximum of 20 important tasks for an interest group should be left out)	Type of group element (e.g. individual, family, nomadic family, village)	Approximate number of related elements

Table 5: Outcomes and Motivations of Local and External user Groups / Institutions

More information about various user groups and organizations related to the field of study will be given in this table as given in Part I - Section 4.12 and 4.13 (user Institutions). If the groups / organizations are operating through different agencies, then mention who are the motivators, mediators and workers concerned? Give how much each group / organization affects nature and what is the effect (desirable or undesirable, good or bad). For example, if an external group of hawkers selling small items is having no effect on the local nature, whereas a cement factory causes a very bad effect on the local nature.

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S.No.	User groups (local / external)	Motivator	Mediator	Worker	Effect : 1- Good 2- Bad 3- Don't Know	Magnitude of the effect 1- More 2- Medium 3- Less

Table 6: Information on nomadic groups

In this table we want to record the information of the nomadic people who regularly visit the village as mentioned in Part I - section 4.14. In order to record the place where these people stay, in addition to whether these people are dependent on animal husbandry, it should be clarified whether this wandering is traditional or newly started.

S.No.	Caravan's Name used in the field	Information of Original village					Wandering type		Caravan's composition		
		Village / Panchayat	Taluka	District	Zip code	State	1- traditional	1- Animal husbandry is important	Group's own name	Number of males	Number of women

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							2- partly traditional 3- started wandering recently	2- Animal husbandry is not important			

Continued :

Information on the nearest place of stay near your village									
The nearest postal pincode	Name of the village and district	Distance from settlement	Number of visits a year	LSE/ WSE where they stay	Duration of stay	From (month / constellation)	Up to (month / constellation)	Significance of this place for nomads	

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Table 7: Landscape Elements (LSE) / Waterscape Elements (WSE) : Types-Subtypes

The work of PBR will begin with the mapping of the study area as suggested in Part I - Section 4.5. The number or code number will be given to different Elements. This will be recorded in Table 7.

The following information should be filled in different columns of this table: 1) Type name (from the standard list in Part I - section 4.6. 2) Type's local name 3) If any subtype is decided then its name 4) Subtype's local name 5) Number of this type/ subtype of elements in the study area 6) Names of selected elements of this type /subtype for further study from several elements 7) Code number given to such selected elements their geographical coordinates and User Groups related to this type. For example: Let's consider a forest in any Gadchiroli village. This type is called Geda in the local language (Gondi). The subtypes will be sparse forest, mixed dense forest, grassland, mixed sparse forest, teak-rich forest, bamboo-rich forest, and mountain forest. Grass forest has been selected for further study. Collector of Minor Forest Produce are related to this subtype as a user group.

						Special information about selected elements	
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Sr. No,	LSE/ WSE type (from standardized list)	Type local name	LSE / WSE subtype	Subtype local name	Study- Number of land / water elements falling under this category in the field	Local name of the element selected for further study	The code number shown on the map of the element selected for further study	Latitude	Longitude	Height (meters)	Survey number	Related User Group

Landscape - Waterscape type (Standard List)

1) Grassland: Mainly grass covered area	15) Creeks
2) Shrubland open: Shrubs with scattered shrubs	16) Swampy region
3) Forest low density	17) The sea
4) Forest medium density	18) Groundwater
5) Forest dense	19) Rocky sea coast
6) Agriculture: Land for seasonal crops	20) Sandy beach

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7) Orchard: Orchard (mango, orange) or plantation of teak, cashew, eucalyptus)	21) Swampy beach
8) Rocky land: Open rocky terrain	22) Mangrove
9) Settlement of dense population	23) Market
10) Settlement of sparse population	24) Warehouses
11) Stream, rivers	25) Factories
12) Canals	26) Special reserves of biodiversity - eg zoos, parks
13) Natural pond	27) Animal Husbandry Land - e.g. Dairy, Poultry
14) Man-made lakes, dams	

Table 8: Local Biodiversity

The registration of local biodiversity will be started from this table as mentioned in Part I - section 4.10. In it we will collect information known to people of species / varieties or more inclusive classes (e.g. worms). We will select some species / varieties / classes for further study from this list. Let's for example look at the species Moha in a hamlet in Gadchiroli district. In the local Gonda language it is called Irpi and it falls into the category of flowering plant. Moha is a species whose scientific name is Madhuca Indica. It is very important species for the locals. It grows in wild as well cultivated. The list of uses is long : it is used as food, for extracting oil from seeds, to make plates from leaves, used in worship. There is no nuisance. People have recommended it for further studies (both quantitative and qualitative). Let's take earthworm as another example. Its Gondi name is Narvanj. It is one of the 'Kankani' type of organism. It belongs to Asteraceae class so classification is class. It has limited local

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significance. The earthworms are wild. - locally used only as bait to catch fish. People have not recommended it for further studies. Here we are not going in details, for example, among the bulls say Khillari, or for Mango say Alphonso, this is not needed. This will be note in later table. It is not mandatory to mention classification or scientific name of species It can wait till we get help of experts.

S. No .	Local name of the organism	Type of organism	Classification level E.g. class, clan, etc.	Scientific names of organism s	Local significanc e	Wild /natural, /reared (under cultivation) or both	The languag e of the local name of the organis m	Major uses	Major nuisanc e	Change s in last 10 years	Reasons for change

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S.No.	Types of organisms	Level of Classification	Local Importance
1.	Bacteria / viruses	1. Kingdom	1. Extremely important
2.	Algae	2. Phylum	2. Generally important
3.	Moss	3. Sub Phylum	3. Unimportant
4.	Lichen	4. Class	4. Simple Harmful
5.	Fungi / Alimbe	5. Subclass	5. Extremely harmful
6.	Neche	6. Order	
7.	Inflorescence	7. Sub-order	
8.	Flowering plants	8. Family	
9.	Worm	9. Subfamily	
10.	Kankani-e.g. earthworm	10. Genus	
11.	Mild bodies - e.g. snails, canals	11. Species	
12.	Insects	12. Sub-species / Varieties	
13.	Spider		
14.	Crust (crab, shrimp)		
15.	Other particleless		
16.	Fish		

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17. Amphibian
18. Reptiles
19. Birds
20. Mammals

Table 9: Biological resources

Individual species' entry should be made in Table 8. Apart from specific species, useful resources (e.g. firewood, fodder) as well as noxious (e.g. weed) resources are to be noted here. As far as information is concerned, a resource should indicate which organisms are included here. Consider the group named "forest products" in the article. This group will include many species like Mohua, Tendu, Bamboo, Bee, Asparagus, Hirda, Char, Beheda etc. Out of them Mohua, Tendu, Bamboo, Bee will be studied individually separately. Only Hirda, Char, Beheda, Asparagus etc. can be studied as "other forest products" here.

S.No.	Local name of biological resources selected (e.g. firewood,	Local name of the organism involved	Language of local names	Important uses	Significant nuisance

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	weeds, etc.)				

Table 10: General Information

The general information of the field of study is to be recorded in this as mentioned in section 4.9.

1) Languages

S.No.	Language 1.1	Dialect 1.2	Language of Education 1.3

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2) Educational Institutions

S.No.	Name of Educational Institution	Contact person	Position
2.1		2.2	2.3

3) Available minerals

S.No.	Minerals	Mining area (hectare)
3.1		3.2

4) NGO

S.No.	NGO	Contact person
4.1		4.2

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5) Source and level of pollution

S.No.	Air / Water / Sound / Soil 5.1	Source	Level
		5.2	5.3

Level - High-1; Normal -2; Low-3

Table 11: History and Culture

As mentioned in Part I - section 4.9, this table should contain as much information as possible about the history of the study area, the history of the people there, the people who have settled in the study area, various festivals related to nature, traditional songs, dances and sayings. There is a facility to record soundtracks of related traditional songs and dance, videos related to nature, so such recordings should be done wherever possible.

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1 History of study area	
2 History of societies in the field of study	
3 History of outsiders	
4 History of those who have left the area of study	
5 Nature related festivals	
6 Biological resources useful in the festival	
7 songs related to nature	
8 Nature related dances	
9 Phrases / sayings related to nature	

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Table 12 A : Focal issues

As mentioned in Part I - section 4.8 , information should be given in this table about the issues related to the natural resources of different user groups. If an issue is not an issue for all the user groups in the village, then it is important to clarify which issue belongs to which group. It should also be clarified to which landscape/waterscape element and to which organisms or biological resources it is related.

For example, in Rani Pipariya village in Madhya Pradesh, the problem of 'wild boar in agriculture' is a focal issue. Here the issue is related to user group 'Farmers', 'Farmland' and 'Forest' are the landscapes and 'Boar' and 'Crops' are the related organisms.

S.No.	Focal Issue	Details	Related User Groups	Related Landscape / Waterscape	Name / Number of the relevant landscape / waterscape Element/s	Affected species (one or more)	Affected biological resources

Table 12 B : Man-Wildlife Conflict

Here we are going to document the details of the events where the marauding wild animal has attacked humans / livestock / crops. The events may have happened in the past few years.

(1) Attack on Humans

Sr. No .	Attackin g animal	Details of the incident	Date of occurrence	The name of the Tapu	Lat.	Long.	Landscape / Waterscap e	Number of deaths of men	Number of deaths of women	Num b er of child death s	Numb er of injure d	Amount of Compensation for death (Rs)	Amount of Compe nsation for injuries (Rs)

(2) Attack on Livestock

Sr. No .	Attackin g animal	Details of the incident	Date of occurrence	The name of the Tapu	Lat.	Long.	Landscape / Waterscap e	Deaths: Animals and their numbers	Injuries : Animals and their Numbers	Amount (Rs) decided in	Amount (Rs) of loss as per estimate	Amount of Compensation

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									<i>Panchan ama</i>	of the livestock owner	received (Rs)

(3) Loss of Crop

Sr. No . .	Attackin g animal	Details of the incident	Date of occurred ence	The name of the Tapu	Lat.	Long.	Landscape / Waterscap e	Name of crop/s and area of damage	Reasons If not applied for compensa tion	Amount (Rs) decided in <i>Panchan ama</i>	Amount (Rs) of loss as per estimate of the farmer	Amount of Compen sation received (Rs)

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Table 13: Survey of selected LSEs

The information is to be gathered by inspecting the selected LSEs shown in the map as mentioned in Part I - section 4.16 . We have to note surface the place, activities done, what people have added, what changes have been made, what has been exploited, and what is the benefit or harm from that particular LSE. What is the proportion of beneficial or harmful organisms and what changes are taking place? These things are to be observed.

For example, let's consider the part of the forest area called 'Etzer' which falls under the category 'Jungle' in Medha-Lekha. It covers an area of about 200 hectares and has a hilly terrain. Gully plugs are made so that the soil is not eroded. From here people extract bamboo and other forest produce. The benefits those people get are forest products, medicinal plants, honey, while the surrounding agriculture is harmed by the wild boar living here.

Sr. No.	Landscape type	Subtype	Local name for landscape type	Local name of the Element	Code number on the map	Latitude	Longitude	Soil composition	Appro. total area (ha)

Continued

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Sr. No.	Important Activities	Important Additions	Significant changes	Important Gains	Benefits	Loss

Table 14 : Quantitative study of tree species, shrubs and Herbs

Some important species / species groups have been selected for quantitative study as mentioned in Part I - Section 4.17 using Point Centred Quarter Method.

Table 14 A : Quantitative estimation of Tree species:

Name of LSE :

Name of tapu in which LSE is located:

Field Observations as per Point Centered Quarter Method

Sr.No.	Point No.	Quarter	Name of nearest Tree	Dist. From the point (m)	Girth at Breast Height.(cm) for nth Branch (Cn)										Resultant Basal Area (A) (sq.cm)
					1	2	3	4	5	6	7	8	9	10	

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Formula A= $\sum C_n \times C_n / (4 \times \pi)$

Results based on the above observations:

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	Total		

Table 14 B: Quantitative estimation of herb and shrub species :

Landscape type: **woodland** landscape subtype: **deciduous forest**

Local name of LSE :

Results of Quantitative Estimation for herb species :

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Species	Number of plants per ha	(#) Median height (cm)	Q1	Q2	Q3

Results of Quantitative Estimation for shrub species :

Shrub species	No. per ha	(#) Median height (cm)	(#) Median canopy (sq.m)	Quartile heights (cm)			Quartile canopy (sq.m)		
				Q1	Q2	Q3	Q1	Q2	Q3

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(#) If Number of square plots where the species is found is 3 or less, then we can't find quartiles. In such case mention the number of plants per ha for each square separately and the median height. If the species is found in 4 or more than 4 plots then calculate Quartile1, Quartile2 and Quartile3 for all these squares together and don't mention median individually for the squares.

Table 15: Observations of selected WSEs

Information is to be collected for selected WSEs shown in the map as mentioned in Part I - 4.17 (B). For a river / stream we have to note length within study area, width and depth at different points. In case of a lake/ tank we note area under water. Information on number of floods, availability of water in a year, what are the activities done, what are the interventions, collection of different materials, advantages and disadvantages from this LSE should be gathered from the people.

Take for example, Kathani river running through the study area of Mandha-Lekha. The part of the river called 'Wadin' was mentioned by the people as important. This waterscape is of type: 'rivers / streams' and sub-types is 'rivers'. According to the locals, the water lasts for about 8 months (240 days). And people do fishing, bring animals for watering and washing and irrigation. The people have not intervened much here but some people have built a small dam here voluntarily (important) and

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people are fishing here. The benefits people get from here include fish, sand, and species. There is no harm to people from this place.

Sr. No.	Waterscape type	subtypes	Code number of Element on map	Local name Element	Average water depth in the area (m)	For river-nala : Length (m)	For river-nala : Average width (m)	for lake-dam-Average Area (ha)	Flood period (days)	water availability (days)

Continued:

Sr. No.	Activities	Important interventions	Significant changes	Important Exploitation	Benefits	Harms

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Table 16: Observations at Sample Points for Selected WSEs -

As discussed in Part I - Section 4.17, sample points should be taken along the edge of each LSE selected for direct observations.

Sr. No.	Name of the waterscape type	Name of the subtype	Code on Map	Point number	Latitude	Longitude	Water flow	The appearance of the bottom	Sources if Polluted	Intensity if polluted

Standard Options

Water flow

Bottom pattern

Intensity of pollution

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- | | | |
|---------------------------------------|------------|-------------|
| 1. Straight flow | 1. Rock | 1. Less |
| 2. Boiling water | 2. Stone | 2. Ordinary |
| 3. Small waterfall | 3. Pebbles | 3. Plenty |
| 4. Ponds in flowing water | 4. Sand | |
| 5. Completely stagnant water,
pond | 5. Mud | |
| 6. Waterfall | | |

Table 17: Changes in Selected LSEs

The information is to be gathered by observing the selected LSEs shown on the map as mentioned in Part I - section 4.16. The information is to be collected from knowledgeable persons about the changes that have taken place there in the last 10 years, the reasons behind those changes and the advantages / disadvantages of the changes to a particular group.

Take the example of a LSE of forest near Yedsakuhi village in Gadchiroli district. According to local people, the area of this piece has decreased, as a part of it has been used for agriculture in the last decade. As a result number of trees has decreased and instead shrubs have thrived. The advantage of collection of minor forest produce has decreased considerably. However, the problem of wild boar has been exacerbated by the proliferation of shrubs which helps them to hide. On one hand farmers' user group is benefitted whereas the user group of minor forest produce is put to disadvantage.

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S.No.	Landscap e type	Subtype	Local name for landscap e type	Local name of the LSE	Code numbe r on the map	Chang e in the area in the last 10 years	Reason s for change	Large trees : change s in the last 10 years	Shrub : changes in the last 10 years	grass and vegetable s: changes in the last 10 years	wild animals: changes in the last 10 years	Livestoc k: changes in the last 10 years

Continued:

Sr. No.	Reasons for change	Beneficiary local User groups	Beneficiary External User groups	local User groups at that suffer losses	External User groups that suffer losses	Changes in benefits	Reasons for change in benefits	Changes in the extent of loss	Reasons for change in loss

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Extent of Change

- 1 Large increase
- 2 Slight increase
- 3 No change
- 4 Some decline
- 5 Large decline

Table 18: Management of Selected LSE

The information is to be collected about the important, selected LSEs shown on the map as mentioned in Part I - Section 4.16. Make a discussion with the members of the various stakeholder user groups about management and fill in the information. Discuss their ideas about what changes are needed in near future should be discussed and finalized unanimously to be included in the working plan.

S.N o.	Landsca pe type	Subtyp e	Local name for landscap e type	Local name of the LSE	Code number on the map	The method of the previous manageme nt	Who has the rights to manag e now?	The current system manageme nt	local User groups benefitte d	External User groups benefitte d	local User groups that suffer losses	Extern al User groups that suffer losses

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Continued

Sr. No .	Local name of the LSE	User group	What changes should be made to the current management in future	What should be the new management system?	What changes should be made in management?	What should be in the working plan?

Table 19: Changes in selected WSEs

The information is to be gathered by observing selected WSEs shown on the map as mentioned in Part I - Section 4.16. Part of this is collected by going to the place and ask the knowledgeable persons about the changes that have taken place in the last 10 years, the reasons behind the changes and the advantages / disadvantages of the change to a particular user group.

Take the example of an ancient *Rushi* lake near a town called Karanja (Lad) in Washim district. The lake falls into the category of 'man-made lakes / dams'. According to local experts, the water level in the lake has dropped drastically along with the growth

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in waterhyacinth in the last 10 years, due to heavy deforestation in the catchment area of the lake. Due to the changes in the ecology of the year, fish production has increased due to release of fish in the lake and due to increase in waterhyacinth, migratory birds have started flocking here in large numbers. Species useful as fuels on the bank of the lake has decreased. This user group of hunters are benefitted by this. But at the same time local farmers have to bear the loss, as the water level is low and they do not have access to water for irrigation. People who have got fishing contract are benefitted. Thus benefit of water for irrigation has dwindled and fishing benefit has increased. According to the opinion of the locals and the local doctor the lake has led to an increase in mosquitoes in the last few years and an increase in the incidence of chikungunya and malaria.

S. No.	Waterscape type	Subtype	Local name for waterscape type	Local name of the WSE	Code number on the map	Changes in the amount of water in the last 10 years	Reasons for change	Changes in the last 10 years in				
								amount of fish	crabs, mussels etc.	Aquatic vegetation	proportion of vegetation on the periphery	proportion of wildlife

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Continued

Sr. No.	Reasons for change	Benefiting local User groups	Benefiting External User groups	local User groups suffering loss	External User groups suffering loss	Extent Changes in the Benefits	Reasons for change in benefits	Extent of Changes in the loss	Reasons for change in loss

Extent of Change

- 1 Large increase
- 2 Slight increase
- 3 No change
- 4 Some decrease
- 5 large decrease

Table 20: Management of Selected WSE

It is intended to collect information about important, selected WSE shown on the map as mentioned in Part I - Section 4.16. We want to record in the information by discussing the management with the members of different stakeholder user groups. We want to include their ideas in a working plan that can be agreed upon by all considering what they would like to do, as well as what can be put into practice today.

Take the example of Rishi Lake of Karanja mentioned in Table 19. In the past management of this lake was done by the local 'Malgujar' (A person entrusted to collect revenue in British India like Jamindar). Presently the management is with Irrigation department. Every 5 years the tank is auctioned to a contractor who introduce fish seeds, but other arrangements for the pond (e.g. sludge removal) are not taken care of. As the contractor is currently local, the local user group, called Fishermen, benefits from it. Presently, no external user group is in picture, However, because of proliferation of mosquitoes everyone in the village suffers. There are different opinions about this lake. According to the fishermen, the royalty rate of the lake should be reduced and the government should help to remove the silt from the lake. According to some nature lovers, fishing should be totally banned. According to a group, who hunt stealthily, they will be benefitted if they are allowed hunt and till the open space of the lake in the summer, According to the three groups, the management should be done jointly by the Irrigation Department and the representatives of the three groups. The three groups are unanimous on - the silt should be removed, trees should be planted on the periphery, the hunters should be given open land for tilling for a few months for a fee and that fee should be used for the management of the lake.

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Sr. No .	Waterscape type	Subtype	Local name for waterscape type	Local name of the WSE	Code number on the map	The method of the previous management	Who has the rights to manage now?	The current system management	local User groups benefitted	External User groups benefitted	local User groups that suffer losses	External User groups that suffer losses

Continued

Sr. No .	User groups	What changes should be made to the current management in future	What should be the new management system?	What changes should be made in management?	What should be in the working plan?

Table 21: Current Status of selected organisms and changes in them

The beginning of the listing of local biodiversity started as discussed in Part I - section 4.10. with all species known to people and additional species (e.g. vermicompost or grasses) The selection of species/varieties/ classes may have been made from this list for further quantitative or qualitative studies as noted in Table 8. From knowledgeable persons information on places where the organisms in table 8 are available, the extent of availability and changes in it should be found out and recorded in this table. In this table we also record landscapes/waterscapes suitable for these organisms, present availability and changes in last 10 years.

Sr. No.	Local name of the organism	Favourable landscape / waterscape	Subtype	Current availability	Changes in the last 10 years	Reasons for change

Current Availability

- 1 No longer found
- 2 Rare
- 3 Medium Occurrence
- 4 Abundant

Change

- 1. Large increase
- 2. some increase
- 3. No change
- 4. Some decrease

5. Large decrease

Table 22 : Biodiversity (domesticated and cultivated)

The recording of local biodiversity, as discussed in Part I - Section 4.10 started from compiling a list of all known species / varieties or more inclusive classes (e.g. earthworms or grasses) from the list. Some of these species may be domesticated / cultivated. There are many varieties of reared species - e.g. mango Alphonso, pyari, or sapphire; or buffalo murra, surati or jafarabadi. Here we note such information as 1) specific name of this variety, 2) local name of this variety, 3) Other varieties of this variety, 4) Time it takes to bear fruit or reproduction, 5) methods used by the local people for its cultivation / rearing, 6) size of this variety when it bears fruit? (7) any special immunity 8) Annual Yield (e.g. In case of grains, how many quintals of paddy per acre is produced, how many eggs does a Kadaknath hen lay eggs per year), (9) useful production (e.g. grain, fodder in case of Sorghum, eggs, meat in case of chicken (10) Local importance (11) Uses (If the use is medicinal, mention the symptoms for which it is used), (12) Has there been any difference in the last 10 years in the cultivation or rearing of this variety and 13) The difference in use in last 10 years (e.g. Previously cooking oil was extracted from the seeds of Uppage plant at home, now all these seeds are bought by the agents of the pharmaceutical company.)

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Table 22 A : Biodiversity of Domesticated Animals

sr. no.	Local name of domesticated animal	Local name of the breed	Names of other breeds like this caste	Reproduction Period (months)	Animal husbandry practices	Height / Length (cm) at full growth	Weight (kg) at full growth	Immunity: Against diseases, water shortage, heat etc.

Continued

Sr. no .	Suitable product	Spatial significance	Uses- If it is a medicine then it is a symptom of the disease / If it is a fertilizer then it is a useful product / Other and for what purpose	Changes in the fruiting rate of this variety in last 10 years	Changes observed in the last 10 years	Reasons for change	Suitable product	How frequently the product is obtained	Measure for the product	Quantity of the product in one go

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Table 22 B Biodiversity of Cultivated Plants

Sr. No.	Local name of Cultivated plant	Local name of the variety	Names of other varieties like these	Fruiting period (months)	Cultivation methods	Rabi, kharif, summer, perennial	At full growth height (cm)	Immunity : Against pests, diseases, loamy soils, water stress etc.	Special significance	Use- If it is a medicine then symptom of the disease / If it is a fertilizer then it is a useful product / Other and for what purpose	Changes in the fruiting rate of this variety in last 10 years	Changes observed in use in the last 10 years	Reasons for change

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Special significance:

1) More important

2) General importance

3) Insignificant

4) Harmful

5) More harmful

change rate:

1. Large increase

2) some increase

3) No change

4) Some decrease

5) Large decrease

Table 22 C Uses of Cultivated Plant-parts

In this table we note the details of useful parts of the cultivated crops / inter crop / trees . The details include average yield, measure of yield etc. Trees are in general scattered in the farm lands. For such scattered trees the information on useful part pertains to a single tree.

Sr. No.	Local name of cultivated Plant	Local name of the variety	Product	Measure of production per hectare	Quantity	Useful product if it is intercrop	Measure of seed for sowing if intercrop i.e. gm	Quantity of product per Measure seed in intercrop	Useful product for sparse trees	Measure for product	quantity

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Table 23: Uses of selected organisms (not cultivated/ domesticated) and changes

As discussed in Section 4.10 of the part I , a local biodiversity inventory may begin by making a list of all genera/species or more inclusive classes (e.g. earthworms or grasses) known to the people. More information about the uses of organisms selected for study should be collected by asking the knowledgeable persons and fill it in table no. 23. In this table fill the information 1) Local name of the organism, 2) What type of product is obtained from this organism (eg. Bhuinmb - Andrographis paniculata-used by Gond tribals as medicine for winter fever), 4) Change in use in last 10 years (eg.new generation no longer eats moha flowers), 5)what part of this organism is used.(eg.moha flowers, toli etc.) .

Sr. No.	Local name of the organism	Useful parts	Suitable product	Symptoms for used as medicine	Changes in usage over the last 10 years

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Changes :

- 1) Large increase
- 2) Some increase
- 3) No change
- 4) Some decrease
- 5) Large decrease

Table 24: Management status of selected Species

All the information collected about the organisms as mentioned in Part I - Section 4.18 is to be used to formulate an action plan with a view to better management of the natural resources. We have to fill in Table 24 and 25 providing information on management by discussing it with members of various user groups associated with the ecosystem. For this purpose, we have to consider all the wild and reared species selected for more study in Table 8 including the varieties of reared species. Ideas from all stakeholders on what they want and what can be brought in practice immediately should be noted for inclusion in the action plan, which will be done by consensus. These ideas could be related with various aspects like conservation, sustainable use, cultivation, value addition and sale . It would be reasonable to consider all these aspects.

Sr. No.	Local name of the organism	Name of the variety	Past management practices	Current management methods	All user groups currently benefiting-	A change in benefits	Reasons for change in benefits	All user groups currently at a loss-	Change in losses	Reasons for change in losses	External user groups and their benefits

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												and losses

Table 25: Management Plan for Selected Species

The idea of various user groups regarding management of selected species should be included in this table. For example, Saldhara Gram Sabha decided to collect tamarind during the fruiting season at one place. It was decided to store it till it fetches higher price. The profit will be distributed amongst the villagers.

Sr. No.	The name of the species	Name of the variety	User groups-	Current management	What changes are needed in the current management	New management methods - how the system should be	What should go in the management plan

Table 26: Management Plan

The ultimate goal of all this work, as stated in Part I - Section 5.5, is to develop a concrete management plan for the conservation, sustainable use and conservation of natural resources with the consent of all people, all user groups and at the same time fulfilling the development aspirations of the people. There are focal issues that need to be addressed in this management plan. These issues are covered in Table 12. Action plans for important LSEs and WSEs from people's perspectives are laid out in Tables 24 and 25. The table also lists the aspirations of different user groups. A viable management plan will be the result of all this effort. Make such a plan and record it in Table 26.

Sr. No.	Focal Issue	Related biological resources	Related species	Related user groups	Related waterscape / landscape Elements	Proposed or decided management plan	Date of decision

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Table 27: Information of persons and their families seeking employment under the Employment Guarantee Scheme:

As discussed in Part I - Section 4.15, the National Employment Guarantee Scheme guarantees to provide employment to all eligible members of each family for 100 days per annum. In Maharashtra the state government gives guarantee of 365 days of employment in a year. Information of the persons and their families who expect the employment should be noted in this table for official registration in this scheme.

sr. no.	First name of the head of the family	Middle name of the head of the family	Family surname	Card number if job card is received	Address	Post / bank account number	Bank code	How many family members need employment?	Is it a Scheduled Caste / Scheduled Tribe?	Did you get land in the land improvement scheme?	Are there any beneficiaries of Indira Awas Yojana?

Table 28: Land / Water related works under NREGS

Many constructive works can be done in different types of LSEs/ WSEs under the Employment Guarantee Scheme as mentioned in Part I - Section 4.18. Based on the information collected in the PBR by consensus, specific works on LSEs /WSEs should be planned using this table. In Mendha-Lekha people decided to build a forest pond by studying a terrain called Etzer. They discussed the nature of work (i.e. what work, where, how to do it), approximate time required for work, approximate manpower

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and expected outcome and created a pond. Also works like making seedlings of specific species or planting them on open land, digging ditches to protect the farm from wild boar, or protecting Devrai may be planned.

Sr. No.	Related water / landscape Elements	Survey number / code on map	Nature of work	Related biological / biological resources affected by the work	Proper months for work	Related user groups	The manpower required for the work	The benefits of this work